





Millennials are driving the trend toward more online sales

ecomm sales have doubled in 5 years

the retail big picture

Consumer spending habits are driving increased retail sales year over year. Brick and mortar is still the king, but online shopping is growing quickly and more consumers are using their mobile devices to improve their shopping experience and make purchases.

- US Annual Total Retail sales have grown from \$3.8 trillion in 2010 and are expected to surpass \$6 trillion by 2020*
- Annual e-commerce sales have doubled over the last 5 years, from \$170 billion in 2010 to \$345 billion in 2015*
- Annual e-commerce sales as a percentage of total retail sales has grown from 4.5% in 2010 and is expected to reach 11% by 2018, a total of around \$414 billion*

These trends are consistent outside of the US. According to the Centre for Retail Research (www.retailresearch.org), the 2015 European e-commerce year to year growth rate was 18.4%, and the e-commerce percentage of total annual retail sales was around 8.4%.

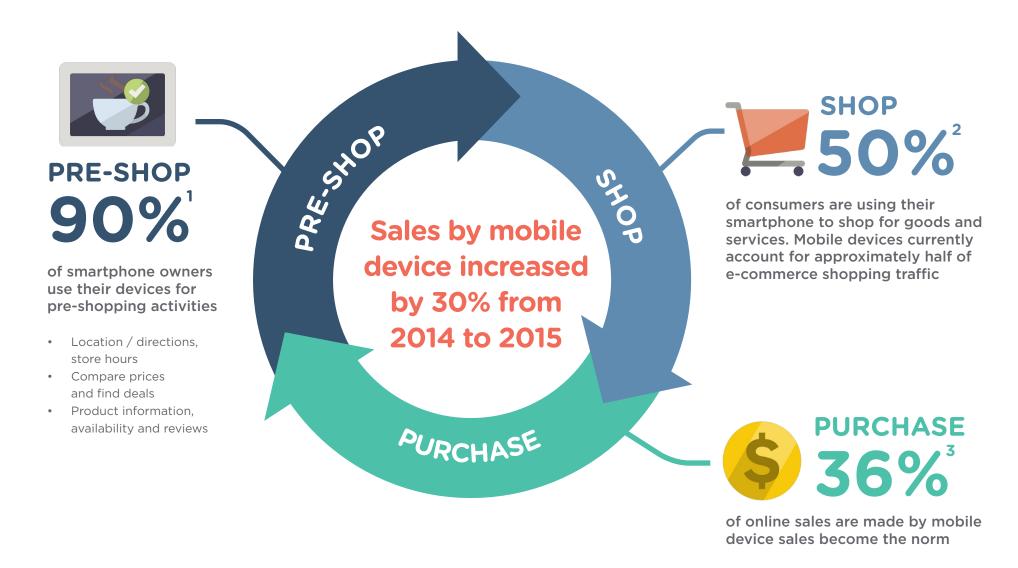






trust in mobile shopping is growing

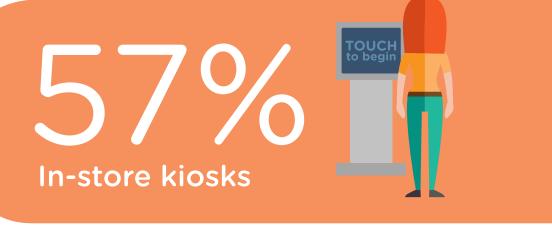
Consumers are becoming more comfortable using mobile devices for their shopping. As their trust builds, they will progress from using their smartphone for pre-shopping activities, to using them to shop for goods and eventually to purchasing goods and services.



shoppers are seeing more in-store mobile technology

Despite all the new devices, applications and technology, consumers have very basic goals when it comes to shopping; They want their shopping experience to be fast and easy, and they want the best deals possible. In SOTI's recent retail mobility studies, shoppers are seeing more in-store mobile technology.







2106 Figure 100 Tablet Interaction (In-store Surveys)

shoppers are seeing in-store technology in more places



Shoppers are getting used to seeing more and more retail technology. Restaurants are using mPOS at the table to improve operational efficiency (customer turnover) and keep their guests happy, while storefront retailers use mobile devices to deliver a unique shopping experience in their aisles.



consumers want more in-store mobile technology

We know that consumers are experiencing more in-store mobile technology in more places, but they still want more.

- Instant discounts
- Coupons/vouchers
- Order online if not available in store
- Store navigation, wayfinding and mapping
- Price checking/ comparison shopping





of shoppers prefer mobile point of sale to traditional cashier checkout

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shoppers prefer mobile point of sale (mPOS)

Shoppers are becoming very familiar with mPOS. They are seeing it in restaurants, hotels, electronic retailers, big box stores, clothing stores and department stores.

Over the last year, an increasing number of consumers (47%, up from 34% in 2014) say that the presence of mPOS is a factor on where they shop.

Their reasons are;

- Faster checkout times, no lineup
- Personalized service, superior customer service
- Digital receipt options
- More informed on-floor sales staff

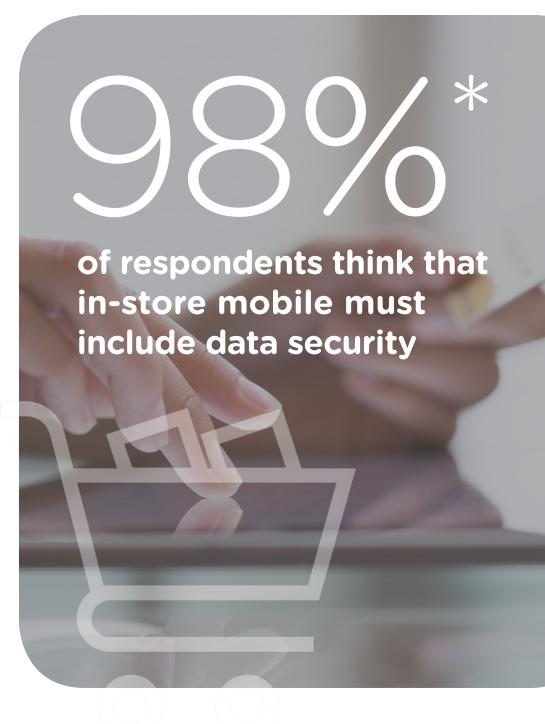
*SOTI retail mobility survey (The Changing Face of the Shopping Experience) SOTI

mPOS security is a concern

Shoppers want their personal information and financial data to remain secure, and if it isn't, they will take punitive action

Shoppers are concerned about the privacy of their financial data and the potential sale of personal information to marketing or third-parties. Most shoppers claim that their retailer has adequate security and privacy safeguards in place for their mobile technology and mPOS. However, trust only goes so far. Many say that they would be unlikely to do business with a retailer if they thought they did not have adequate security precautions in place, or if they had suffered a security breach of payment or personal information. If a retailer leaked the customer's payment or personal data, they would;

- Pursue legal action
- Boycott shopping at this retailer
- Expose via social media
- Tell friends and family



shoppers want a consistent retail experience

Whether a customer is shopping online via the web, on their smartphone or physically in a store, they want a consistent user experience across all channels and devices. In an ideal world, the shopper will transition between the different channels at will to make their purchase experience wherever they are the most comfortable.



want a consistent, branded shopping experience across all channels

Retailers are seeing two growing shopping trends

Show Rooming



Examine and size the merchandise within the brick and mortar store before price checking and purchasing the product online.

Web Rooming



Research a product online including user reviews and price comparison, and then purchasing the item within the physical store.

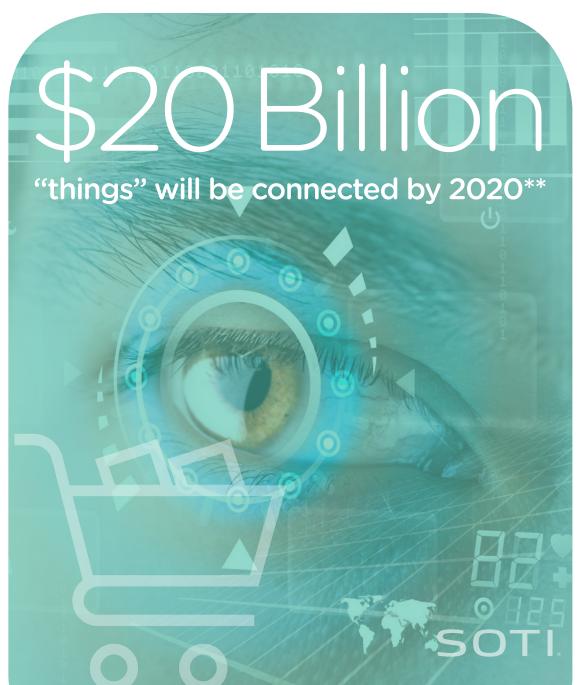
the future of retail technology

Retailers are embracing mobile technology in all areas of their operations. The most promising area for investment is around the IoT. In the IoT, we will see billions of diverse endpoints and devices connected together to create complex systems that can sense for themselves and use analytics and business intelligence to respond appropriately. These adjustments and events will happen without any human intervention, faster than any human is capable of, and maybe without any human awareness.

Over the next five years, global retail IT spending is projected to almost quadruple*

In addition to conventional technology like laptops, smartphones and tablets, retailers will be spending their budgets on;

- Bluetooth beacons
- RFID technology
- mPOS solutions
- Wearables
- Augmented reality devices like smart mirrors
- Big Data



what are bluetooth beacons?

Beacons are low-cost, low-powered transmitters equipped with Bluetooth Low Energy (BLE) that can be used to invoke proximity-based, context-aware messages out to a range of 70 meters. Consumers are excited by the potential beacons have to offer for customized offers and proximity based discounts, but worried about the pervasive nature of Bluetooth beacons and their ability to track their movements. Fortunately, there are multiple layers of "opt-in" required for Bluetooth beacons to work.

- 1. Presence of relevant application
- 2. Compatible Bluetooth activated on mobile device
- 3. Allow location services through the relevant app
- 4. User must opt-in to receive notifications



BLE beacon devices in market by 2019.

Beacons are very versatile and it seems like new applications are appearing every day. Some of the more common applications are:



- Beacons located on the outside of the store can invoke a message on a shopper's device about a special "walkin" promotion and discounts.
- Shopper is greeted as they enter the store directing them to the product they viewed online.
- In the store aisles, a shopper's proximity can invoke additional offers and discounts or related products or inventory overstock.

- A retailer can track the shopper's movement through the store to see which aisles customers do not visit.
- As they leave the store, customers are thanked and asked to review the product or store and can be rewarded with a customized coupon.

Source: ABI Research

SOTI

RFID expedites the supply chain

RFID may be old news, but it is also a proven benefit to supply chain automation. Retailers are leveraging their RFID investment into store aisles to deliver real-time insight into stock and inventory.

Radio Frequency Identification (RFID) technology is not new. This technology has been around for over 30 years. In basic terms, RFID uses radio waves to identify and track objects using embedded tags. There are two main types of RFID tags;

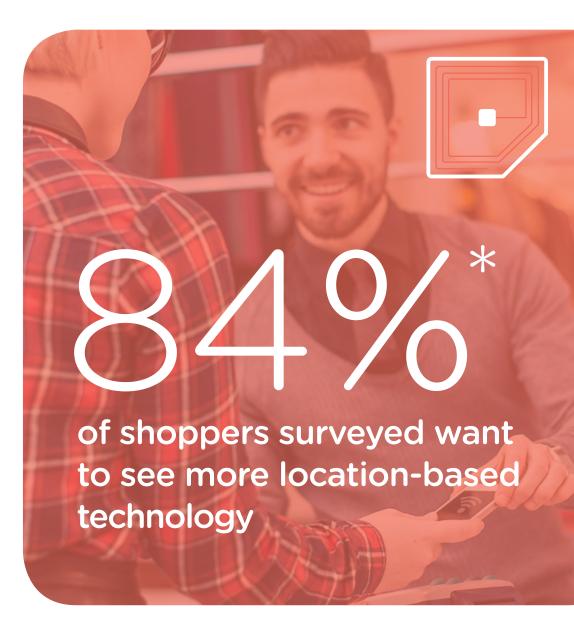
Active

Typically longer range and more expensive, active RFID tags include a transmitter and their own power source to broadcast a signal to an RFID reader. A passive RFID tag does not have a battery, but draws its power from the reader to send out its signal.

Passive

RFID is shorter range, but unlike barcode scanning, does not require line of sight.

RFID is very popular in the retail industry and has been used to track inventory across the supply chain. Increasing its popularity in the store allows shoppers to interface with kiosks and quickly identify a product and check inventory. When used in conjunction with smart shelves, RFID tags can provide real-time inventory management and help prevent "shrinkage" and theft.



kiosks add value throughout the store

A kiosk is a dedicated purpose computing device, usually a tablet, which provides help to a shopper without allowing them to access other features and functions on the device. In-store kiosks can improve the shopping experience in many ways.



Navigation - The shopper can use the device to search for a product and then locate where it is displayed in the store.

Product Information - When integrated with a barcode scanner, or RFID reader, a kiosk can quickly identify a product to report pricing, inventory level and detailed product data such as reviews or warranty information.

Price Comparison - Allows the shopper to do product price comparisons.

Loyalty Program Registration - Customers can enroll into your loyalty program quickly and easily.

Ordering - Allows customers to order online when a product is out of stock.

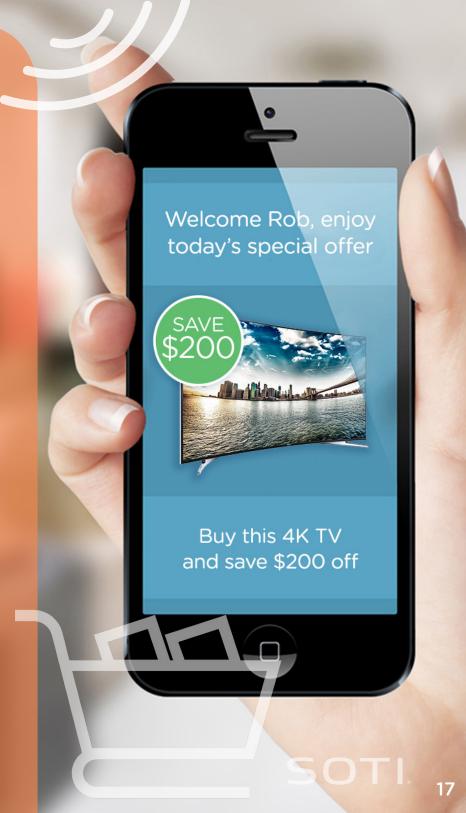


IoT: new opportunities new challenges

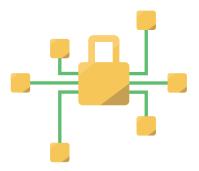
Consumers are demanding more mobile technology to deliver a cheaper, faster and easier shopping experience. In response, retailers are embracing omnichannel strategies and deploying more in-store technology to satisfy the demands of their shoppers, reduce costs and increase revenue. All of this new in-store technology; mobile devices, LOB applications, and Internet of Things (IoT) endpoints, needs to be secured and managed.

The rapid influx of new IoT endpoints into the retail vertical offers tremendous opportunities, but it also creates new challenges.

- Scale In addition to smartphones and tablets, new categories of devices will drive much larger deployments. Endpoint deployments could reach hundreds of thousands.
- Diversity Retailers are deploying devices as simple as RFID tags and BLE Beacons, and as complicated as smart "magic" mirrors and NFC-enabled mPOS devices. Device management needs to be able to profile and control the different categories and types of devices.
- Standardization Like any new technology, the IoT is seeing a large number of competing standards with no clear leaders (yet).
 A successful device management solution needs to support the majority of these standards.
- Security The increase in the number of device usage creates a management problem, but on top of that, increasingly more sensitive data is being transmitted to and from these devices.
 All of this data needs to be kept private and confidential.



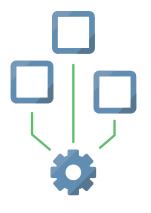
With SOTI, your possibilities are endless



SOTI secures it all

Retailers are deploying more smartphones and tablets as Point of Sale terminals must adhere to the Payment Card Industry Data Security Standard (PCI DSS). These guidelines state that every merchant is responsible to

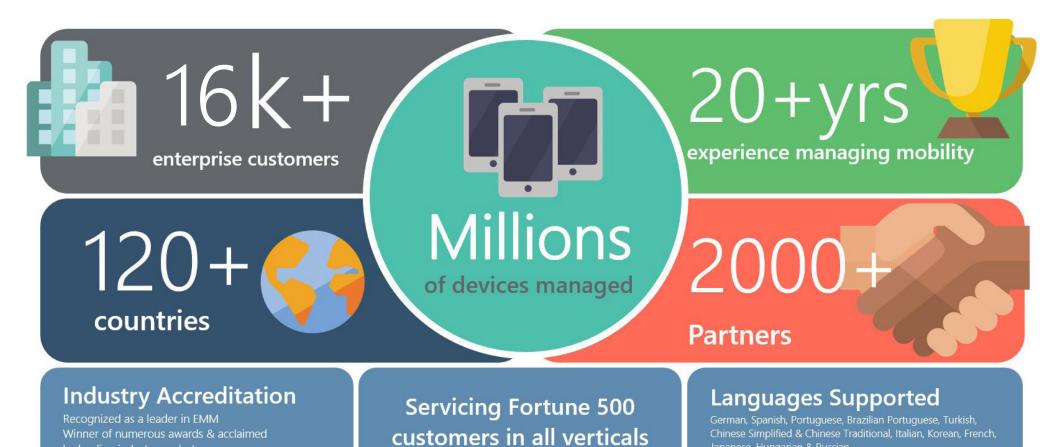
"take steps to establish and maintain the security of any mobile device being used as part of a payment solution. SOTI delivers comprehensive security for all retail mobile devices. We enforce device authentication, data encryption and manage certificates to prevent unauthorized device use and data loss on the device or over the air. SOTI tracks lost or stolen mobile devices, and if required, we can shut devices down or wipe them in the field.



SOTI manages it all

Retailers are looking to advance their mobility strategy. In addition to smartphones and tablets they are deploying many new IoT endpoints with different capabilities and diverse connection standards throughout the entire retail supply chain. However, retailers still want to deploy and

manage company applications and content through a centralized, configurable and scalable system. SOTI makes mobility management easy. We provide a 360° view of mobility management across the entire retail supply chain. We help streamline retail operations, protect data & devices, and empower store employees to keep pace with the customer's growing expectations.



SOTI is a proven innovator and UEM industry leader. Over 16,000 companies globally rely on SOTI for their diverse mobility management needs to fuel differentiation and take mobility to endless possibilities.





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